

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-30 are presently active; Claims 1, 6-10, 12, 14, 19-27, and 30 have been presently amended.

In the outstanding Office Action, Claims 1, 6-8, 11, 14, 19-21, 26-28, and 30 were rejected under 35 U.S.C. § 102(e) as being anticipated by Tse (U.S. Pat. No. 6,198,845). Claims 2-3 and 15-16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tse in view of Shirasawa (U.S. Pat. No. 5,689,590). Claims 4-5, 9-10, 17-18, 22-23, and 29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tse in view of Kamo (U.S. Pat. No. 5,465,160). Claims 12-13 and 24-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tse in view of Mortimore (U.S. Pat. No. 5,740,428).

Firstly, Applicant acknowledges with appreciation the courtesy of Examiner Thompson to conduct an interview in this case on June 29, 2006, during which time the issues in the outstanding Office Action were discussed as substantially summarized herebelow.

In Claim 1, as clarified, an image processing unit applies one or more types of image processing to the image data and applies image processing identical to the one or more types of image processing to original background level value data (that is separate from and not part of the image data) to produce modified background level value data. A background removal unit removes background noise from the image data having undergone the image processing according to a threshold that is derived from the modified background level value data having undergone the image processing.

As discussed during the interview, Tse discloses generating and compressing a histogram of the distribution of various gray levels within a scanned image. A mid-range background grey-level is determined based on for example the distribution of grey levels in the

mid rang of the histogram, for example based on grey levels 199-202 in Figure 1 or grey levels 48-52 in Figure 2. This differs from one aspect of the present invention in which for example peak holder 49 shown in Figure 5 captures the most intense light signal from the CCD, and uses this value and not a mid-range value for background noise removal.

Furthermore, specifically with regard to independent Claims 1, 14, 26, 27, and 30, while Tse performs image processing based on the mid-range background level, Tse does not disclose applying image processing identical to the one or more types of image processing applied to the image data to background level value data that is separate from and not part of the image data. (See for example Applicant's Figure 6 showing the appending of background level value data to the image data.). To this point, the examiner seemed in concurrence.

Accordingly, Applicant submits that, with no teaching or suggestion in Tse of image processing background level value data by which background noise can be removed according to a threshold determined according to the modified background level value data, Claims 1, 14, 26, 27, and 30 (and the claims dependent therefrom) patentably define over Tse.

With respect to independent Claims 12 and 24, during the interview, Applicant's representative discussed that these claims define a choice between the performing and non-performing of a background noise removal from scanned image data. Background noise removal is always performed in conventional scanners. Indeed, the histogram methods of Tse are in effect a background noise removal process. Thus, combining Mortimore and Tse, as asserted in the Office Action, so as to have a choice *not* to perform noise background removal would render Tse unsatisfactory for its intended purpose. While Applicant continues to believe that the combination of Mortimore and Tse does not render Claim 12 obvious, no agreement was reached during the interview on this point. Accordingly, in order to expedite prosecution of the present application, Claims 12 and 24 have been amended to include subject matter similar to that discussed above for the other independent claims.

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Thus, Applicant submits that Claims 12 and 24 (and the claims dependent therefrom) patentably define over Tse.

Consequently, in view of the present amendment and in light of the above discussions, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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